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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------|-------------|----------------------|---------------------|------------------|
| 09/824,763 | 04/04/2001 | Hiroshi Hattori | 1-127 | 1461 |
| 23400 | 7590 | 01/14/2004 | EXAMINER | |
| POSZ & BETHARDS, PLC | | | VU, BAO Q | |
| 11250 ROGER BACON DRIVE | | | ART UNIT | |
| SUITE 10 | | | PAPER NUMBER | |
| RESTON, VA 20190 | | | 2838 | |

DATE MAILED: 01/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-----------------|----------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/824,763 | HATTORI ET AL. | |
| | Examiner | Art Unit | |
| | Bao Q. Vu | 2838 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11-17-2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-5 and 9-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-5 and 9-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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4. Claims 2 and 5 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Fujiwara (USP 6,225,844). Fujiwara (see figure 6) and discloses a load drive apparatus a control circuit (3), a power source terminal (In), an output terminal (To), a ground terminal (G), a first capacitor (CL) and a resistor (R1).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3, 4, 9-13, 17-24, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara (USP 6,225,844) in view of Glennon (USP 4,35,408) and Lindquist (USP 4,716,343). Fujiwara discloses the claimed device (see above paragraph) except for the use of the parallel switches and a time constant controlled input with one shot for switching. Glennon and Lindquist disclose that it is known in the art to provide the use of the parallel switches (Glennon figure 4, Q1 and Q2) and a time constant (Lindquist, figure 1, 108, 110, and 106) and controlled input with one shot (Lindquist, figure 1, 22) and (Glennon figure 4, 56) for switching. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the use of the parallel switches and a time constant controlled input with one shot for switching of Glennon and Lindquist with the output buffer circuit of Fujiwara, in order to have a number of parallel devices to act as a single switch as in the case of the

parallel switches. The use of the one-shot multi-vibrator results in the precise control of the output frequency of the signal controlled oscillator circuit. The use of the RC circuit (time constant) at the input serves a two-fold purpose to delay the turn on of the circuit and by this delay also serves to protect the circuit from input voltage spikes and noise inherent at startup.

7. Claims 14, 15, 25, 16, 28-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara (USP 6,225,844) in view of Glennon (USP 4,35,408) in view of Lindquist (USP 4,716,343) and further in view of Ohta (USP 5,942,882).

Fujiwara, Glennon, and Lindquist disclose the claimed device except for the use of a temperature/heat detection circuit. Ohta discloses that it is known in the art to provide a temperature/heat detection circuit. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the temperature/heat detection circuit of Ohta with the drive circuitry of Fujiwara, Glennon, and Lindquist, in order to have a protective circuit to prevent the overheating of the circuit elements and monitor the state of the circuit under operating conditions.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bao Q. Vu whose telephone number is (703) 308-2318. The examiner can normally be reached on Monday-Fridays, 8:00AM- 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael S. Sherry can be reached on (703) 308-1680. The fax phone

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number for the organization where this application or proceeding is assigned is (703) 872-9318.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

A handwritten signature in black ink, appearing to read 'Bao Q. Vu', with a stylized, cursive script.

Bao Q. Vu
Primary Examiner
Art Unit 2838

January 7, 2004